



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,646	03/30/2001	Indra Laksono	VIXS.0100020	8519
29331	7590	05/19/2004	EXAMINER	
TOLER & LARSON & ABEL, L.L.P. 5000 PLAZA ON THE LAKE AUSTIN, TX 78746			CZEKAJ, DAVID J	
			ART UNIT	PAPER NUMBER
			2613	5

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,646

Applicant(s)

LAKSONO, INDRA

Examiner

Dave Czekaj

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. A few examples the examiner could not find in the drawings are the prioritization method, the predefined selection method, and the plurality of compressors/encoders. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 13 and 26 are objected to because of the following informalities:

Regarding claim 13, what is the one-to-one correspondence between display streams and display devices?

Regarding claim 26, the examiner understood "steam" to be "stream".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 and 42-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Girod et al (6480541), (hereinafter referred to as "Girod").

Regarding claims 1 and 42-43, Girod discloses an apparatus that relates to the field of compressed motion video and more specifically to pre-compressed stored video for video-on-demand applications (Girod: column 1, lines 14-16). This apparatus comprises "receiving a display data" (Girod: figure 2, wherein the display data is the video in), "determining if a predetermined criteria is met by a first representation of display data, wherein the first representation of the display data includes a first plurality of display streams to be transmitted to a second plurality of display devices" (Girod: column 7, lines 50-67 – column 8, lines 1-14, wherein the predetermined criteria is the amount of available bandwidth, the first plurality of display streams is the video data coded at the first level, the second plurality of display devices are the users of the video-on-demand server. The predetermined criteria or available bandwidth is determined for each channel. The display stream, or video, having the highest bit rate tolerable by the channel is then selected), and "compressing a first display stream when it is determined that the first representation of the display data does not meet the predetermined criteria" (Girod: column 7, lines 42-67 – column 8, lines 1-14, wherein the predetermined criteria is the amount of available bandwidth. The system compresses the display stream or video and then selects one of the compressed streams based upon the available bandwidth of the channel).

Regarding claim 2, Girod discloses "providing the display streams to the second plurality of display devices using a common medium" (Girod: column 8, lines 15-18, wherein the display streams is the video, the common medium is the video-on-demand server which allows multiple users to access and watch the video desired by the user).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-12, 15-18, 22-26, 28, 30-32, 34-36, and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girod et al (6480541), (hereinafter referred to as "Girod").

Regarding claims 3 and 8, Girod discloses "the common medium is part of a local area network and wide area network" (Girod: column 8, lines 15-18, wherein the common medium is the video-on-demand server). Although not disclosed, it would have been obvious to implement the video-on-demand server on a wide and local area network (Official Notice). Doing so would have been obvious in order to easily share the video to a vast number of users.

Regarding claims 4-7, cable, twisted pair wires, optical fiber, and wireless Radio Frequency are all obvious type variations of different ways to construct a

network. Having these types of networks would have been obvious in order to be able to place a network in a variety of settings.

Regarding claims 9 and 34, Girod discloses "a predetermined criteria is met when it is expected that each display stream can be transmitted in manner for real time simultaneous display" (Girod: column 10, lines 16-26, wherein the predetermined criteria is the available channel bandwidth, the real time display is the receiving of the real time video sequence for subsequent output).

Regarding claims 10-12, Girod discloses "determining for each stream whether an actual transmission time for a video frame matches a predicted transmission time within a predetermined tolerance" (Girod: column 7, lines 50-67 – column 8, lines 1-14, wherein the predetermined tolerance is the maximum bit rate for each channel. The examiner notes that the bit rate is measured as a function of time. The actual and predicted times are calculated to ensure there is not too much data being transmitted. The corresponding compressed bitstream that maximizes the channel bit rate is then selected to transmit).

Regarding claims 15-18, video, graphics, digital, and analog data are all obvious types of variations of data that can be received by the user. Being able to accommodate these types of data would have been obvious in order to be able to accommodate a variety of different needs of the user.

Regarding claim 22, Girod discloses "determining if a predetermined criteria is met when the display streams are to be transmitted using a fixed bandwidth (Girod: column 7, lines 50-67 – column 8, lines 1-14, wherein the

predetermined criteria is the amount of available bandwidth, the fixed bandwidth is the maximum available bandwidth for that channel).

Regarding claim 23, Girod discloses "the fixed bandwidth is the maximum bandwidth of the transmission medium" (Girod: column 7, lines 50-67 – column 8, lines 1-14, wherein the transmission medium is the channel which accepts the highest bit rate tolerable or maximum bit rate).

Regarding claim 24, Girod discloses "the fixed bandwidth is a predetermined portion of the available bandwidth of the transmission medium" (Girod: column 7, lines 50-67 – column 8, lines 1-14, wherein the transmission medium is the channel, the predetermined portion is the highest bit rate tolerable by the channel).

Regarding claim 25, Girod discloses "the fixed bandwidth is the maximum bandwidth of a processing device that performs the step of compressing" (Girod: figure 2, column 7, lines 50-67 – column 8, lines 1-14, wherein the processing devices are the coders. The examiner notes that the coders supply the video data to be transmitted at a rate maximizing efficiency of the system).

Regarding claims 26 and 28, Girod discloses "selecting the stream using a predefined selecting method and having the greatest amount of data" (Girod: column 7, lines 50-67 – column 8, lines 1-14, wherein the predefined method is selecting the stream or video that uses the highest bit rate tolerable by the channel. The examiner notes that the high bit rate streams would have the greatest amount of data).

Regarding claim 30, Girod discloses "selecting the first stream is based on previous compression of a display stream" (Girod: column 7, lines 50-67 – column 8, lines 1-14, wherein the first stream is selected only after is has been previously compressed).

Regarding claims 31-32, Girod discloses "compressing in a first manner when its determined the first stream has not been compressed, compressing in a second manner when its determined the first stream has been previously compressed, and compressing in a third manner when its determined the first stream has been previously compressed" (Girod: figure 2, column 7, lines 41-45, wherein the video is the stream, compressing in three different bit rates indicates that a stream is compressed once and upon completion a second and third time).

Regarding claims 35-36 and 39-40, Girod discloses "the plurality of compression methods includes reducing the precision and resolution of the display stream" (Girod: column 7, lines 41-45, wherein the different bit rates and different quantization levels reduce the precision and resolution).

Regarding claim 41, Girod discloses "the stream includes MPEG data" (Girod: column 8, line 61, wherein the MPEG data is the I-frame).

5. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girod et al (6480541), (hereinafter referred to as "Girod") in view of Norsworthy et al (614402), (hereinafter referred to as "Norsworthy").

Regarding claim 13, note the examiners rejection for claim 1 and in addition claim 1 differs from claim 13 in that claim 13 further requires a one-to-

one correspondence between display streams and display devices. Norsworthy teaches that having a one-to-one correspondence, at an increased cost to the user, can deliver better quality video (Norsworthy: column 8, lines 1-18, wherein the one-to-one correspondence is the channel set up between the provider and the customer). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Girod and add the one-to-one correspondence taught by Norsworthy in order to obtain an apparatus that delivers higher quality video to a customer.

Regarding claim 14, Norsworthy discloses "there are fewer display streams than display devices, where at least one stream is shared by two or more display devices" (Norsworthy: figure 1, wherein the display devices are the computers 101a-101n which are shown to receive one stream of data from the cable plant or broadcaster).

6. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girod et al (6480541), (hereinafter referred to as "Girod") in view of Keren et al (20010026591), (hereinafter referred to as "Keren").

Regarding claim 19, note the examiners rejection for claim 1 and in addition claim 19 differs from claim 1 in that claim 19 further requires display data from a plurality of sources. Keren teaches that it is well known in the cable distribution art to have a plurality of sources supply display data (Keren: paragraph 0365, lines 1-9, figure 4, wherein the plurality of sources are viewing channels, pay-per-view, telephone, audio). Therefore, it would have been

obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Girod and add the handling of the plurality of sources taught by Keren in order to obtain an apparatus that is more robust by being able to handle a plurality of sources. One would be further motivated since it is well known in the art to do so.

Regarding claim 20, Keren discloses "receiving a portion of the display data from a stream having a plurality of multiplexed channels" (Keren: figure 4, wherein the channels are the pay-per-view, channels, telephone, the multiplexer is the mixing box).

Regarding claim 21, Keren discloses "the digital data stream is a MPEG stream" (Keren: paragraph 0016, wherein it is digital streams are well known in the MPEG-II environment).

7. Claims 27, 29, 33, and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girod et al (6480541), (hereinafter referred to as "Girod") in view of Putzolu (6584509).

Regarding claims 27 and 38, note the examiners rejection for claim 1 and in addition claims 27 and 38 differ from claim 1 in that claims 27 and 38 further requires using a round robin mode of selection. Putzolu teaches that a round robin scheme allows all classes to have equal opportunities to access the links (Putzolu: column 7, lines 1-15). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Girod and add the round robin scheme disclosed by

Putzolu in order to obtain an apparatus that operates more efficiently by being able to select streams in a fair and equal manner.

Regarding claim 29, Putzolu discloses "selecting is based on prioritization of one or more of the display streams" (Putzolu: figure 3, wherein the display streams are the segments).

Regarding claim 33, Girod in view of Putzolu disclose "determining if an estimated transmit time meets an actual transmit time within a desired tolerance, if not, there is too much data being transferred" (Girod: column 7, lines 50-67 – column 8, lines 1-14, wherein the predetermined tolerance is the maximum bit rate for each channel. The examiner notes that the bit rate is measured as a function of time. The actual and predicted times are calculated to ensure there is not too much data being transmitted. The corresponding compressed bitstream that maximizes the channel bit rate is then selected to transmit), "selecting a first stream of the plurality of display streams based on a prioritization method" (Putzolu: figure 3, wherein the display streams are the segments), "selecting one of a plurality of compression methods to be applied to the first stream" (Girod: figure 3, column 7, lines 41-45, wherein the plurality of compression methods are used to code the video at three different bit rates, selection is done using the switch), and "repeating each of the steps until determining indicates the actual transmit time is within the desired tolerance of the estimated time" (Girod: column 10, lines 17-26, wherein the bit rates are constantly compared to the

bandwidth. If the bandwidth drops, a request is made to transmit video at a lower bit rate, which is repeated until successfully delivery of the video).

Regarding claim 37, note the examiners rejection for claims 19 and 33.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-6215821	04-2001	Chen, Howard Z
US-5652749	07-1997	Davenport et al.
US-6366614	04-2002	Pian et al.
US-6724726	04-2004	Coudreuse, Jean-Pierre
US-6219358	04-2001	Pinder et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (703) 305-3418. The examiner can normally be reached on Monday - Friday 9 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600